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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/098,190 06/16/98 SHEATS

J 10980239-1

LM02/0602

HEWLETT-PACKARD COMPANY
IP ADMINISTRATION
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PALO ALTO CA 94303-0890

EXAMINER

PIZIALI, J

ART UNIT

PAPER NUMBER

2778

DATE MAILED:

06/02/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/098,190

Applicant(s)

Sheats et al.

Examiner

Jeff Piziali

Group Art Unit

2778



☒ Responsive to communication(s) filed on Mar 27, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 3-12 is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 3 and 8 is/are rejected.

☒ Claim(s) 4-7 and 9-12 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dingwall (5,903,246) in view of Hosokawa et al. (5,142,343).

In regards to claims 3 and 8, Dingwall discloses a display [column 2, lines 5-9] comprising a plurality of light emitting pixels (P), each pixel (P) comprising an isolation transistor (T), a driving circuit (C and TR), and an organic light emitting diode (P), the driving circuit (C and TR) storing a value that determines the magnitude of the light emitted by that pixel (P), the driving circuit (C and TR) placing the OLED (P) in a conducting path between first (Column) and second (Row) power terminals, the isolation transistor (T) connecting the driving circuit (C and TR) to a bit line (Column) when the isolation transistor (T) is placed in a conducting state by the application of a logic signal to a word line (Row) [figure 2; column 4, line 35 - column 5, line 45], wherein the OLEDs (P) are part of an array of OLEDs (P), the array comprising: a sheet (glass substrate) having first and second surfaces, the first and second surfaces being parallel to one another, the sheet being transparent to light of a first wavelength; a first electrode (ITO anode)

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comprising a first electrode layer in contact with the first surface, the first electrode layer being transparent to light of the first wavelength; a light emitting layer (organic hole transport layer) comprising an organic polymer in electrical contact with the first electrode layer; and a plurality of second electrodes (cathode), one such second electrode corresponding to each OLED (P), each of the second electrodes (cathode) comprising an isolated conducting area in contact with the light emitting layer, the light emitting layer generating light of the first wavelength in a region adjacent to the second electrode when a potential difference is applied across the first (anode) and second (cathode) electrodes [figure 1; column 3, line 42 - column 4, line 34]. Dingwall does not disclose expressly a flexible substrate.

However, Hosokawa et al. disclose a plastic substrate [column 4, Lines 35-39]. Dingwall and Hosokawa et al. are analogous art because they are from the field of organic light emitting diode display devices. At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize Hosokawa's plastic substrate as Dingwall's substrate. The motivation for doing so would have been to save on manufacturing cost and weight. Therefore, it would have been obvious to combine Dingwall with Hosokawa et al. to obtain the invention as specified in claims 3 and 8.

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Allowable Subject Matter

3. Claims 4-7 and 9-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not expressly disclose a bonding layer comprising an anisotropic conductive adhesive located between the transistor array and the array of OLEDs, the bonding layer being in contact with a plurality of connection points and electrically connecting each of the second electrodes to a connection point corresponding to the second electrode without electrically connecting any one of the second electrodes to a connection point that does not correspond to the second electrode.

Response to Arguments

4. Applicant's arguments filed March 27, 2000 have been fully considered but they are not persuasive in regards to claims 3 and 8.

The applicant contends Hosokawa et al. (5,142,343) does not disclose a flexible substrate, but merely a plastic substrate [column 4, Lines 35-39]. The examiner respectfully disagrees. Merriam Webster's Collegiate Dictionary (10th Edition) defines 'plastic' as "capable of being deformed continuously and permanently in any direction without rupture" and lists the synonyms: "pliable, pliant, ductile, malleable, adaptable." One of ordinary skill in the art at the time of invention would have known a plastic substrate, by very definition, may be flexible in nature.

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Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (703) 305-8382. The examiner can normally be reached on Monday - Friday from 6:30 AM to 3 PM E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

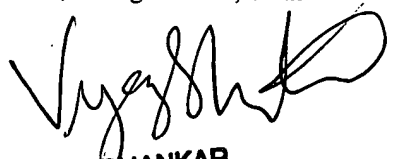
or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED
PROCEDURE")

Or:

(703) 308-6606 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


VIJAY SHANKAR
PRIMARY EXAMINER

JP
5/31/00